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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/720,623	12/27/2000	Satoshi Mori	MAEJ-136	3428

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EXAMINER

ZIMMER, MARC S

ART UNIT PAPER NUMBER

1712

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/720,623

Applicant(s)

MORI ET AL.

Examiner

Marc S. Zimmer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 3,6,8 and 12-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3,6,8,12-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 6, 8, 12-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bogan, U.S. patent # 4,927,905 in view of Mori et al., WO 00/35988 (U.S. 6,407,150 is used as an English language equivalent and all column/line cites are for the U.S. document) or Yoda et al., U.S. Patent # 5,368,977 for the reasons outlined in the correspondence dated November 11, 2004 and also because Mori and Yoda advocate reducing the water content within the reaction system to below 100 ppm for a "smoother" reaction (column 8, lines 19-22 of '977) or because the product obtained is considerably less colored (column 5, lines 39-42 of '150). That is, one of ordinary skill would have been motivated by the teachings of Mori and/or Yoda to minimize the amount of water in the phenol resin-forming system to realize the benefits mentioned *supra*.

It was alleged by Applicants in their response dated January 21, 2005 that the product obtained by adhering to the process parameters outlined in Bogan's disclosure would not necessarily have the product distribution mandated at the end of step (1) of claim 12. To support their position, Applicants note that Example 1 and Comparative Example 1 produce different outcomes despite the fact that they differ only in the

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amount of catalyst employed. In view of this observation, Applicant argues that the Examiner's assertion of inherency is not necessarily valid.

The Examiner acknowledges based on this evidence that the particular system disclosed in Example 1 of Bogan modified in the manner suggested by Mori and/or Yoda may or may not yield the same product distribution at the end of the stage corresponding to step (1) of Applicant's invention. At the same time, Bogan's broader disclosure suggests (see column 1, lines 50-60, column 2, lines 7-10, column 2, lines 36-38, column 4, lines 33-36) innumerable other systems using different temperatures, reaction times, catalyst amounts, mol ratios of phenol to dicyclopentadiene, etc. While it is conceivable that the couple of embodiments expressly disclosed may not adhere to the product distribution limitation set out in claims 12, 17, and 20, it is impossible that all of the systems suggested by the broader disclosure would fail to produce the claimed outcome. "A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments." *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), *cert. denied*, 493 U.S. 975 (1989). "Disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments." *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). Accordingly, the inventions disclosed by the aforementioned claims are obvious.

Concerning claim 3, the broader invention suggested by the aforementioned combination will, likewise, include reaction systems where the stated ratio is inherently satisfied.

As for claim 13, the amount of catalyst used in Example 1 corresponds to 0.39% by weight of the total of the reactants and catalyst. (Again, it is appreciated that Example 1 doesn't necessarily adhere to the product distribution limitation but there are certainly other systems employing a similar amount of catalyst that are suggested by the prior art that would adhere to this requirement.)

As for claim 16, it is contemplated in column 5, lines 44-48 of Mori that azeotropic distillation may be used to reduce water content to an acceptable level.

As for claims 18 and 20, insofar as similar reaction times and temperatures are proposed for the second stage by Bogan, this aspect is inherently satisfied.

As for claim 6, Mori discloses that epoxy resins derived from phenolic resins of the type disclosed by Bogan have utility as sealants for the manufacture of electronic devices hence it would be obvious to further modify the process disclosed by Bogan by reacting the phenol resins taught therein with a compound that introduces epoxide moieties.

Concerning claims 19 and 21, while it is believed that Applicants are referring to the measurement of ether content prior to raising the temperature to 110° C or higher marking the beginning of the second stage, this is not explicitly stated. In column 2, lines 16-18, there is an acknowledgement that the product of the first stage must be subjected to temperatures exceeding 90° C, and more preferably 140° C to 150° C (column 2, lines 9 and 10), to facilitate the rearrangement to the desired product. Thus, it is the Examiner's position that the skilled artisan would be motivated to measure ether content as a means of monitoring the conversion to the rearranged product. Insofar as

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the ether intermediate product is not even formed until dicyclopentadiene is added, measurement would obviously take place after this step is completed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

July 20, 2005

*Marc Zimmer*  
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AU 1712